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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/596,278

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HeeYoung Lee

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EXAMINER

SU, SUSAN SHAN

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/596,278	<b>Applicant(s)</b> LEE, HEEYOUNG	
	<b>Examiner</b> SUSAN SU	<b>Art Unit</b> 3761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Status of Claims***

Claims 1-7 are pending and are examined on the merits.

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the pressure and speed adjustors must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

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Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the numbering of the valves as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schenck et al. (US 5,431,620, "Schenck") in view of Herrig (US 5,478,479).

With regard to Claim 1, Schenck teaches a centrifuge comprising a centrifugal device having buckets (20), a rotor (14), and a chamber (16), a drive unit (12), a controller (as depicted by Fig. 2), a power supply (inherent in any centrifuge), and a case (32) having a door (34), further comprising:

a pump device (36) for vacuum and compression;

a connector (42) to connect the pump device with an external unit (drive motor 12).

Schenck does not teach that the pump device is mounted in the case; neither does Schenck teach valves. It is held that the mere rearrangement of essential parts of

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a device, i.e. putting the air pump on the case instead of outside, requires only routine skills in the art.

Herrig teaches the use of valves ( $V_1$ - $V_3$ ) in a circuit with an air pump (P) in a tissue suction and injection system. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Schenck with Herrig for the purpose of having additional means to manipulate the fluid flow of the within the system.

With regard to Claims 2 & 3, Schenck and Herrig do not expressly teach pressure adjustors and speed adjustors. However, Herrig does teach that the pump is capable of operating at a variety of speeds. The pump functioning at different speeds is functionally equivalent to using speed adjustor to adjust the fluid flow in the conduit leading from the air pump. The pressure is inherently adjusted according to speed of the air pump, e.g. higher the speed higher the pressure exerted on the conduit leading from the pump. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Schenck and Herrig for the purpose of varying the speed at which tissues are removed or returned to the body.

7. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alchas et al. (US 5,035,708, "Alchas") in view of Schenck and further in view of Herrig.

With regard to Claim 4 & 6-7, Alchas teaches a method of performing liposuction using a centrifuge comprising:

- performing a liposuction process (Col. 4 lines 14-21);

- performing a centrifugation process (Col. 5 lines 62-65).

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Alchas does not teach the specific features of the centrifuge, first to fifth valves, the foot switches, a lipoinjection process, or opening valves to equilibrate pressure inside and outside the system.

Schenck teaches the features of the centrifuge, as discussed in Claim 1. Herrig teaches a tissue removal and return system comprising a pump (P) and multiple valves ( $V_1$ - $V_3$ ) that are remotely controlled (Col. 4 lines 40-46). Although Herrig is mute to the specific means of control, it should be understood that one skilled in the art would know to implement one of a variety of commercially available electrical or manual switches (button switches, flip switches, foot switches, etc.). In the instant case, since the operator of the system typically would have both hands occupied using the liposuction/lipoinjection catheter, it would be more desirable to use a foot switch to control the valves and subsequently the fluid flow. It is also conventional knowledge to add more valves when there are more conduits involved, therefore mere duplication of essential working features does not make the instant claimed feature of five valves patentably distinct from prior art. Herrig also teaches opening and closing the valves along with activating or deactivating the pump (Col. 4 lines 59-65). It would require only routine skills in the art to program the controller so that the pumps and valves are operated in a way to aspire or inject the tissue. Equilibrating the pressure inside and outside conduits is a common practice in the medical arts since operators understand that air is highly compressible. When a closed conduit is not "purged" of air, it may lead to errors in the amount of materials/tissues being delivered or aspirated and the speed at which the materials/tissues move within the conduit. Such results can pose serious

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danger to a patient; therefore one skilled in the art would have known to open valves inside a closed circuit to allow the air pressure to equilibrate, especially when the same closed circuit is used for both vacuum and compression.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Alchas with Schenck and Herrig for the purpose of streamlining the procedure of liposuction and lipoinjection.

With regard to Claims 5, Herrig further teaches safety devices (Col. 6 line 15-19) in the form of optical sensors to prevent spillage by slowing down the pump when the sensor detects a certain signal. It would be obvious to one skilled in the art that safety measures such as this should be employed in the system claimed by the Applicant so that either the suction or injection procedure would not be done at a rate that can cause danger or discomfort to the patient. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Alchas with Schenck and Herrig for the purpose of safely operating a device inside an operating room.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUSAN SU whose telephone number is (571)270-3848. The examiner can normally be reached on M-F 8:30AM-6:00PM EST (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tatyana Zalukaeva can be reached on 571-272-1115. The fax phone



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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Susan Su/  
Examiner, Art Unit 3761

/Tatyana Zalukaeva/

Supervisory Patent Examiner, Art Unit 3761